Proposition 4.41. *[297] $\leq$ is a well ordering.*

Proof. Trace of proof. By Lemma [289] (point [(2)]) we know that this relation satisfies the strong induction principle [1XS]; so we can prove that any non empty subset has a minimal element as in Esercise [1XP]; but we know that the ordering is total, so the minimal element is the minimum. □